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ABSTRACT

A study examined changes in students' valuing of reading during middle childhood and early adolescence. The study evaluated reading teachers' instructional practices as well as students' achievement motivation. Subjects were 254 male students and 276 female students: 140 in third grade; 142 in fifth grade; and 248 in sixth grade. The sample of 54 teachers included 43 female and 11 male, with a range of full time teaching experience from 1 to 41 years, in 1990. In examining reading teachers' instructional practices, results indicated that female teachers use supplemental materials in reading and writing instruction more than do male teachers; teachers of younger students use parents as tutors more than do teachers of older students; and elementary school teachers use rewards and parents as tutors more than do middle school teachers. In examining student-level data, results indicated that females and younger children value reading more than do males and older children. Finally, student and teacher level data were combined, using hierarchial linear modeling (HLM). Findings reveal: (1) performance oriented instructional strategies and cooperative learning techniques are negatively related to gains in valuing of reading over time; (2) the relationship between self-concept of ability and valuing of reading is somewhat lower in classrooms that are ability-grouped for reading instruction; and (3) reading is valued less in middle school than in elementary school. (Contains 9 tables of data and 29 references.) (Author/CR)

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Classroom Influences on the Value of Reading

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Abstract

This study examines changes in students' valuing of reading during middle childhood and early adolescence. In examining reading teachers' instructional practices, results suggest that female teachers use supplemental materials in reading and writing instruction more than do male teachers; teachers of younger students report using parents as tutors more than do parents of older students; elementary school teachers report using rewards and parents as tutors more than do middle school teachers. In examining student-level data, we found that females and younger children report valuing reading more than do males and older children. Finally, we combined student and teacher-level data using hierarchical linear modeling (HLM). We found that after controlling for student-level characteristics, the use of performance-oriented instructional strategies and the use of cooperative learning techniques are negatively related to gains in valuing of reading over time. The relationship between self-concept of ability and valuing of reading is somewhat lower in classrooms that are ability-grouped for reading instruction. Students also report valuing reading less in middle school reading classrooms than in elementary school reading classrooms.

Classroom Influences on the Value of Reading

Why do some students come to value reading, while others do not? Why do some students love to read books, while others find reading to be a boring, useless task? During the past decade, researchers have suggested that the instructional practices of teachers can influence the development of such values (e.g., Eccles & Midgley, 1989). The present study examines individual and classroom level factors which influence changes in students' achievement values toward reading during middle childhood and early adolescence.

Motivation Across Subject Areas

Students' achievement motivation may vary by subject domain (Stodolsky, Salk, & Glaessner, 1991; Young, Arbreton, & Midgley, 1992). Consequently, the factors that motivate a student to try to achieve in mathematics may be somewhat different than the factors that are related to motivation in science, literacy, or music. In the present study, we specifically examine individual and classroom level factors related to the valuing of reading.

Motivation and Reading. Some studies have examined classroom characteristics that are related to changes in students' valuing of literacy activities. For example, Wigfield, Eccles, and their colleagues (Wigfield, Eccles, MacIver, Reuman, & Midgley, 1919) examined changes in students' self-concept of ability in English before and after the transition to junior high school. They found that self-concept of ability in English declined after the transition. Students' self-reported liking of English declined after the transition, but then increased during the seventh grade, after the transition. The researchers suggest

that the instructional practices of middle school teachers may be responsible for some of these changes (Eccles & Midgley, 1989; Wigfield et al., 1991).

Raines & Isbell (1992) found that providing young children who were uninterested in reading with access to books without any teacher mediation did not lead to changes in students' interest in reading. Turner (1995) suggests that the type of task given to students is an important predictor of motivation during reading activities. In particular, she found that "open" literacy tasks (involving student control and higher-order thinking) were strong predictors of motivation. Nevertheless, overall, there is a dearth of studies which specifically examine classroom-level practices related to changes in the valuing of reading during middle childhood and early adolescence.

An Array of Motivational Perspectives

In the present study, we utilize two distinct albeit related motivational perspectives. The primary motivational model that we use is Eccles and Wigfield's expectancy-value model (Eccles, 1983; Wigfield & Eccles, 1992). Briefly, task value is defined in terms of a student's interest, feelings of importance, feelings of utility, and perceptions of cost related to a particular task or domain; expectancy beliefs are composed of students' self-concepts of ability and expectancies for success in the future. Research suggests that values are better predictors of choices (such as enrollment in courses in the future), while expectancies are better predictors of academic achievement (Wigfield & Eccles, 1992). In the domain of reading, values refer to how important reading is to the student, how interesting it is, how useful it is, and how much cost is involved in reading; expectancies refer to the way students perceive themselves as readers

(e.g., as good or bad readers), and their expectations for future success or failure at reading.

In order to examine classroom factors which may influence the development of values in reading, we also make use of constructs from goal orientation theory (Ames & Archer, 1988; Dweck & Leggett, 1988; Maehr & Pintrich, 1991; Nicholls, 1989). Goal orientation theorists posit that that there are two primary goals which students adopt in achievement situations: mastery goals and performance goals.[1] A student is mastery goal oriented when the student engages in a particular task in order to really learn about and master the task at hand; the primary goal is to deeply understand the task. In contrast, a performance goal oriented student is primarily interested in demonstrating his or her ability. Such students do not want to be perceived as incompetent, and do not want to look badly in front of others. Research suggests that classroom and school-level practices influence the development of these goal orientations. Specifically, when teachers and schools use instructional practices that are in line with a mastery goal orientation (e.g., giving students a great deal of time to get involved with their work, not stressing grades and competition, etc.) as opposed to practices that are in line with a performance goal orientation (e.g., displaying the work of the best students as examples to others, pointing out the best students as examples, encouraging competitive activities where the same students always win, etc.), students are likely to adopt the goal orientation that is stressed in the classroom (Ames & Archer, 1988; Anderman & Young, 1994) or school (Anderman, Maehr, & Midgley, 1996; Maehr, Midgley, & Colleagues, in press).

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[1] Other goals, such as social goals, also are related to student motivation and achievement in important ways (Urdan & Maehr, 1995; Wentzel, 1991); however, an examination of those goals is beyond the scope of the present paper.

Research Questions

In the present study, we combine the tenets of Eccles and Wigfield's expectancy X value model with goal orientation theory to examine classroom level factors which influence changes in students' valuing of reading during middle childhood and early adolescence. Specifically, we address the following research questions:

1. What types of instructional practices do classroom teacher use for reading?
2. What are the characteristics of children who value reading?
3. What is the relationship between teachers' instructional practices and students' valuing of reading?

Method

Data for this study come from the Childhood and Beyond Study, which is a longitudinal study of the development of achievement values during middle childhood and early adolescence. The present sample includes data from all 520 of the students who participated during the third and fourth waves of the study. In addition, this study also includes data from the 53 teachers who instructed these students in reading during wave 4. Students completed surveys during the spring of 1989 and 1990, while the reading teachers completed instruments during 1990. Identical questions were asked at each survey administration.

Description of Samples

The student sample consists of 254 males (48%) and 276 females (52%). The students in this study are primarily white (92%). Data for this study were collected when 140 students were in the third grade (26.4%), 142 students were in the fifth grade (26.8%), and 248 students were in the sixth grade (46.8%). Data were also collected from all students during the prior school year, when they were in the second, fourth, and fifth grades; however, only one measure from the prior year is used in the present study.

The teacher sample includes 54 teachers, of whom 43 are female (79.6%) and 11 are male (20.4%). The number of years of full time teaching experience ranges from one to 41 years ($M = 16.19$, $SD = 9.72$).

Student Measures

All of the measures used in the present study have been developed over time with various samples of students at differing ages. We include measures of reading value, reading self-concept of ability, reading worry, parental assistance with reading activities, and free-time reading activities. These scales have been found to be reliable and valid in a number of studies (e.g., Eccles, Wigfield, Harold, & Blumenfeld, 1993; Eccles & Wigfield, 1995). All students took the Slosson IQ test during the first year of data collection. Items and Cronbach's alpha coefficients are presented in Table 1.

Teacher Measures

Teachers completed surveys indicating the types of instructional practices that they use in their classrooms. We included several of these measures in the present study, including measures of teachers' performance and mastery-oriented instructional strategies, use of rewards and demerits, use of parents as tutors, teacher efficacy, use of special

motivational techniques, use of supplemental materials in reading and writing, and use of cooperative learning and ability grouping. Items and Cronbach's alpha coefficients are displayed in Table 2.

Results

Results are presented in three sections. First, we present differences in the instructional practices of teachers by teacher gender, grade level, school type (middle vs. elementary), and teacher efficacy. Next, we examine characteristics of students that are related to the valuing of reading. Finally, we combine the student and classroom/teacher data, and present a comprehensive hierarchical linear model which combines classroom and school data.

Reading Teachers' Classroom Practices

We first examined differences in practices by gender of teachers. Results are presented in Table 3. Female reading teachers reported feeling slightly more efficacious than did male teachers ($t = 1.84$, $p<.07$), and female teachers reported using more supplemental materials in reading and writing instruction than did male teachers ($t= 2.49$, $p <.01$).

Table 4 contains comparisons of third, fourth, and sixth grade teachers' practices. Grade level differences were found for teaching efficacy ($F = 3.58$, $p<.05$) and use of parents as tutors ($F = 5.34$, $p<.01$).. Post-hoc Tukey's HSD tests suggest that third grade teachers report feeling more efficacious than do sixth grade teachers. This replicates the findings of other studies (e.g., Midgley, Anderman, & Hicks, 1995) which have found higher levels of efficacy for teachers of younger students, compared with teachers of older students. In addition, third grade teachers report using parents as tutors more often than

do sixth grade teachers. There is a moderate effect of performance orientation ($F = 2.45$, $p = .09$), although post-hoc tests do not detect any differences between grade levels. Nevertheless, an inspection of the means suggests that third grade teachers ($M = 3.80$) use performance oriented strategies less than do fourth grade teachers ($M = 4.47$) and sixth grade teachers ($M = 4.58$). A Levene's tests for homogeneity of variance suggest that variances in the cells are unequal for mastery oriented practices (Levene's coefficient = 3.26, $p<.05$) and for the use of demerits (Levene's coefficient = 7.41, $p<.01$). However, wherever there was a significant difference among grades, there were no significant differences in variance between cells.

Since some of the sixth grade classes were in middle school settings, we compared the instructional practices of elementary and middle school reading teachers. Results are presented in Table 5. Results suggest that elementary school teachers use rewards ($t = 2.70$, $p<.01$) and parental tutors ($t = 2.42$, $p<.05$) more than do middle school teachers. In contrast, middle school teachers report using supplemental materials in reading and writing instruction more than do elementary teachers ($t = -2.73$, $p<.01$).

Finally, we divided the teachers into a low and high efficacy group, and examined differences on instructional practices based on level of teacher efficacy. We felt that it was important to do this since prior studies have linked teacher efficacy to student outcomes (e.g., Midgley, Feldlaufer, & Eccles, 1989). The only significant difference was in teachers' reported use of mastery-oriented instructional strategies: teachers higher in efficacy reported using these strategies more ($M = 6.29$, $SD = .62$) often than did teachers who reported lower efficacy ($M = 5.72$, $SD = .75$; $F = 8.92$, $p<.01$).

Characteristics of Students Who Value Reading

Means and standard deviations for student-level variables are presented in Table 6. In Table 7, we present results of ANOVAs examining gender and grade level effects. For valuing reading, we found main effects for gender and grade: females report valuing reading more than do males ($F = 9.99$, $p<.01$), and children in lower grades report valuing reading more than do children in higher grades ($F = 10.22$, $p<.001$). Identical relationships were observed for the measure of valuing of reading from the prior school year. Female students report higher self-concepts of ability in reading than do males ($F = 5.80$, $p<.05$). There are no differences by gender or grade level in the amount that students report that their parents help them with reading, and students' reported level of worrying about reading.

The only differences between elementary and middle school students on the student-level variables were for valuing of reading. Students who are in middle school settings value reading less than do students in elementary schools, $t= 2.49$, $p<.01$ (Mean middle school = 4.97, SD = 1.06; mean elementary school = 5.21, SD = 1.06).

Table 8 includes zero order correlations between student level variables. We included IQ in the correlational analyses as well. Valuing of reading is stable across time ($r = .49$). Valuing of reading is strongly related to self-concept of ability in reading ($r = .58$), and weakly related to parental assistance with English homework ($r = .13$) and to worrying about reading ($r = .17$). Valuing of reading is unrelated to IQ ($r = .06$).

The Full Model

In this study, we use Hierarchical Linear Modeling (HLM; Bryk & Raudenbush, 1992) to separate the within classroom variation in students' valuing of reading from the

between classroom variance in valuing reading. By using HLM, one can model both individual student characteristics and classroom-level characteristics into a more comprehensive model. The model takes both student and classroom-level variables into account.

HLM is a relatively new statistical technique which is extremely useful for examining the effects of various organizational contexts on individual outcomes. Bryk & Raudenbush (1992) note that aggregation bias can occur when variables take on different meanings at different organizational levels. Consequently, in the present study, the use of HLM allows for the simultaneous examination of student and classroom-level factors that may be related to the valuing of reading. Multilevel regression techniques such as HLM calculate standard errors of the estimates more appropriately than do more common ordinary least squares (OLS) approaches to regression (Paterson, 1991). When researchers use OLS techniques with nested data, the standard errors often are calculated as too small. Therefore, confidence intervals are also calculated as being too small (see Paterson, 1991).

Intraclass Correlation. The intraclass correlation is a statistic which describes the amount of variance that lies between organizational units in an HLM analysis. In the present study, the classroom is the organizational unit, with the students nested in classrooms. We used the teacher who instructs each child in reading to define the classroom-level units for this study. The intraclass correlation for the valuing of reading is 14.24% ($\chi^2 = 79.37$, $p<.01$), which means that 14.24% of the variance in valuing of reading lies between classrooms. Consequently, this between-classroom variance may be able to be explained by characteristics that vary by classroom, such as differing instructional practices.

HLM Model. For the HLM model, we standardized all continuous variables to z-scores, so that results could be interpreted in terms of effect sizes. We recoded the

dependent variable (valuing reading) into a gain score which is equal to the difference between valuing of reading during the current school year, and valuing of reading during the prior school year. Although there often may be a correlation between gain scores and students' initial status, Willett (1994) suggests that gain scores are in fact often appropriate to use as dependent variables, despite much prior criticism of the use of gain scores. We used the measure of valuing of reading from the prior year as a covariate in the analysis. At the student (individual) level, we also used gender, IQ, self-concept of ability in reading, worrying about reading, and parental assistance with reading as student-level controls.

For the classroom-level analyses, we used all of the variables presented in Table 2 as predictors. Specifically, we modeled these level-two variables on the intercept and on the self-concept of ability slope. We also used a measure of whether or not reading instruction was ability grouped, and whether or not reading was taught with cooperative learning activities. We also examined effects of teacher gender and years of teaching experience. We fixed the variances of the other level-one (student-level) predictors, so that they did not vary between classrooms, since we had no reason to hypothesize that any of the dependent variables other than self-concept of ability would vary systematically between classrooms.

Results of the full model are presented in Table 9. Grade levels were incorporated as dummy variables, but none were significant, so they were not included in the final model. The first model includes all student-level variables, and the classroom-level variables that remained significant after all were tested on both the intercept and the self-concept of ability slope. The second model again includes all of the student-level variables, and uses a classroom-level variable which is a dummy variable where a value of 1 represents a reading class in a middle school, and a value of zero represents a reading class in an elementary school. We did not use this variable in the first model, since this could be interpreted as a school-level variable. In such cases, a three-level HLM model

can be used (see Bryk & Raudenbush, 1992). However, since we do not have enough schools in our sample to develop a strong three-level model, we tested the middle-school factor as a level-two (classroom-level) factor in a separate two-level HLM model.

In both models, all of the fixed effects are statistically significant. Students with higher IQ, higher self-concept of ability at reading, and students whose parents help them with English value reading more than do their peers. In addition, females value reading more than do males, after controlling for all of the other factors. Students who report worrying about how they do at reading also value reading more. The covariate (valuing of reading from the prior year) is significant in both models.

The advantage to using HLM is that the classroom-level variables can be interpreted as additive effects, as in a more traditional ordinary least squares regression (Bryk & Raudenbush, 1992). In the full model, the addition of classroom-level variables suggests that students value reading less when their teachers use performance-oriented instructional strategies, and they also value reading less when teachers report using cooperative activities more often. The use of parents as tutors is moderately related to greater valuing of reading. In the middle school model, results suggest that when students learn reading in middle school classrooms, they value reading less than they do in elementary classrooms, after controlling for other factors.

While the purpose of the present study is not to fully explain the variance in the valuing of reading, it is possible to examine proportions of explained variance in the HLM models. All of the significant between-classroom variance was explained for self-concept of ability slope in the full model ($\chi^2 = 47.10$) and in the middle school model ($\chi^2 = 49.37$). In both the full and the middle school models, 61 % of the variance between schools was explained ($\chi^2 = 73.06$, $p<.01$ for full model, $\chi^2 = 90.41$, $p<.001$ for middle school model).

Discussion

Results of the present study suggest that classroom-level factors do play a role in the development of achievement values in the domain of reading. Since valuing of reading was measured at two points in time and in two separate classrooms, it is possible to assess change in the present HLM models. After controlling for prior valuing of reading and individual variables, classroom practices do have an effect on changes in students' overall valuing of reading.

The student-level characteristics used in the models indicate that after controlling for prior valuing of reading, students who showed greater gains in valuing of reading were those who worry somewhat about their reading performance, those whose parents help them with English work, those with higher IQ's, those with higher self-concepts of ability, and females.

After controlling for student-level characteristics, we found that students whose teachers reported using performance-oriented instructional strategies, and students whose teachers reported using cooperative learning activities, increased their valuing of reading less than the students of teachers who did not use these techniques as often. The use of parents as tutors is weakly but positively related to greater gains in valuing of reading over time.

It is not surprising that the use of performance oriented instructional strategies is related to smaller gains in reading value, since a variety of studies suggest that performance focused instructional strategies are related to lower levels of motivation during middle childhood and early adolescence (e.g., Ames & Archer, 1988; Anderman & Young, 1994; Dweck & Leggett, 1988; Maehr & Pintrich, 1991). When the goals of the classroom are focused on competition, grades, and demonstrating one's ability, then students are unlikely to become deeply engaged in academic tasks; consequently, it is unlikely that students will have experiences that will lead to the development of achievement positive values (Eccles, 1983; Eccles & Wigfield, 1995).

The finding that cooperative learning techniques are related to small gains in valuing of reading is somewhat surprising. A variety of studies suggest that the use of cooperative learning techniques is related to higher levels of achievement and motivation (e.g., Slavin, 1995). In the present study, teachers indicated how often they used cooperative learning activities in reading and writing; however, the nature of the cooperative tasks is unknown. For cooperative learning to be truly effective, it must be carried out in specific ways (Slavin, 1995). Thus it is possible that some of the teachers in the present study were using cooperative learning activities in ways that impeded the development of positive achievement values in reading.

In the present study, the positive relationship between self-concept of ability and gains in the valuing of reading is diminished for students who learn reading in ability-grouped reading settings. Although this finding is not strong, it is still important. While the literature on the effects of ability grouping is complex, some studies do support the notion that the types of courses taken by students (e.g., high vs. low track) are related to academic achievement (e.g., Lee, Bryk, & Smith, 1993). Results of the present study suggest that the dynamics of ability-grouped reading classes do not foster the development of positive achievement values in reading, compared to non ability-grouped reading instruction.

In the middle school model, gains in the valuing of reading are diminished when students learn reading in middle school settings, as compared to elementary schools. Motivation declines as student move from elementary schools to middle schools (Anderman & Maehr, 1994; Eccles & Midgley, 1989; Simmons & Blyth, 1987). This finding has been related to differences between elementary and middle school teachers in their levels of efficacy, their instructional practices, and their relationships with students (e.g., Eccles et al., 1993; Eccles & Midgley, 1989; Midgley et al., 1993; 1995; Maehr, Midgley, & Collaborators, in press; Wigfield et al., 1991). Comparisons of the practices of elementary and middle school teachers in the present study suggest that middle school

teachers use rewards less and supplemental reading/writing materials more than do elementary school teachers. However, the use of rewards and supplemental materials is probably not a direct determinant of motivation; rather, it is the *ways* in which these rewards are used that probably makes a difference. It is thus plausible that middle school teachers use rewards and supplemental instructional materials differently than do elementary school teachers, and that these differences are responsible for some of the lower gain in valuing of reading experienced by middle school students.

The present study included both student and teacher-level data. Future studies could be improved through the use of observations in classrooms. While the use of teacher data is important, recall that our teacher data were reported by classroom teachers. While the teacher measures demonstrated good variability, reliability, and construct validity, they would be greatly improved in future studies with validation from direct observations of teachers' instructional practices.

The use of HLM in the present study is helpful in identifying classroom level practices which may be related to changes in the valuing of reading during middle childhood, after controlling for student-level factors. While ordinary least squares regression and analysis of variance techniques allow for an examination of some of these factors, multilevel regression techniques such as HLM allow for the appropriate and systematic examination of variance using different units of analysis simultaneously (Bryk & Raudenbush, 1992). Results of the present study suggest that several classroom-level factors, including the use of performance oriented instructional strategies and the use of ability grouping in reading, are related to smaller gains in the valuing of reading over time. Children develop important beliefs about their futures, their competencies, and their abilities during middle childhood and early adolescence, and classrooms and schools have strong influences on the development of these values (Eccles, Midgley, & Adler, 1984). Results of the present study suggest that certain instructional practices that are within the control of teachers, parents, and administrators do indeed relate to the changes in some of

these values. Since these practices are controllable, the use of more appropriate classroom-level instructional techniques may lead to a greater valuing of reading among children and adolescents.

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Table 1.

Student Scales, Items, and Reliabilities

Scale	Item	Alpha
Reading Value	In general, how useful is what you learn in reading? Compared to your other activities, how useful is what you learn in reading? For me, being good at reading is ... (not at all important... very important). Compared to most of your other activities, how important is it for you to be good at reading? In general, I find working on reading assignments ... (very boring... very interesting). How much do you like doing reading?	.79 Wave 3 .76 Wave 4
Reading Self-Concept of Ability	If you were to list all the students in your class from the worst to the best in reading, where would you put yourself? How good are you at reading? Compared to most of your other school subjects, how good are you at reading? How well do you expect to do in reading this year?	.80
Reading Worry	How much do you worry about doing badly in reading?	Single item
Parental Help With Reading/English	How often does mother or father help you with your English homework?	Single item
Reading During Free Time	How often do you read books, comic books, or magazines for fun?	Single item
IQ	Standardized score on the Slosson IQ test, administered during first year of study to all students	--

Table 2.

Teacher Scales, Items, and Reliabilities

Scale	Item	Alpha
Performance Oriented Instructional Strategies	How much emphasis do you place on..... Working for top grades in the class. Spending a lot of time studying facts or basic skills. Achieving higher test scores. Knowing who is doing the best and striving to do as well.	.61
Mastery Oriented Instructional Strategies	How much emphasis do you place on..... Attempting challenging assignments or projects even when faced with difficulty. Paying attention to their own improvement. Pursuing their own ideas and interests. Having fun doing projects or assignments, even if it takes more class time than expected. Choosing or initiating projects on their own.	.80
Use of Rewards *(1= Never.....7=daily)*	Phone calls to parents for good conduct. Phone calls to parents for completion of assignments. Special parent conferences as a reward for completion of assignments. Notes to parents for good academic performance.	.75
Use of Demerits *(1= Never.....7=daily)*	Phone calls to parents for failure to complete assignments. Special parent conferences for failure to complete assignments. Notes to parents for poor academic performance. Phone calls to parents for poor academic performance. Phone calls to parents for bad conduct.	.79
Use of Parents as Tutors CHECK WITH ROB ON HOW THIS WAS CREATED.	Sum of responses to activities that teachers ask parents to get involved in, either at home or as volunteers in school: math facts, reading, writing, spelling, computers, field trips/parties, clerical help in class, mentoring/career awareness, developing/supervising special projects, other.	--
Teacher Efficacy	How much my students achieve depends to a large extent on what I do in the classroom. If some students in my class are not doing well, I feel that I should change my approach. By trying a different teaching method, I can significantly affect a student's achievement	.82
Use of Special Motivational Techniques	Sum of number of techniques used from the following list: contests, rewards like candy, special recognition like class announcement, special privileges, games, reports to parents, special opportunities to do additional work in reading/writing.	--

Total Reading/Writing Supplements	Sum of number of supplements used from the following lists (one measure was for reading alone, and one was for combined reading and writing): FOR READING: computer instruction, dramatics, puppets, broadcasts/videos, literature, cooperative activities/contests, independent studies, reading in content areas, current events, unique other activity, outside speakers, field trips, book reports, oral reports. FOR WRITING: pen pals, book/story/yearbook publishing, news summaries, art, computers, creative writing, journals, research reports, process writing, unique other activity, broadcast/videos.	--
Cooperative Learning	How often do you schedule cooperative academic activities or games where students must work collaboratively to plan and carry out a group activity or produce a group product in reading/writing?	Single Item

Table 3.

Differences in Instructional Practices of Female and Male Reading Teachers

Variable	Female	Male	t-value
Performance Oriented Strategies	4.19 (1.16)	4.30 (1.09)	--
Mastery Oriented Strategies	6.11 (.70)	5.76 (.84)	--
Use of Demerits	1.95 (1.69)	2.44 (1.47)	--
Use of Rewards	3.32 (1.68)	2.93 (1.43)	--
Teacher Efficacy	5.76 (.93)	5.15 (1.16)	1.84~
Reading Supplements	1.62 (.78)	1.30 (.48)	
Reading/Writing Supplements	3.12 (1.37)	2.00 (.67)	2.49**
Parents as Tutors	2.44 (1.08)	2.27 (1.19)	

* $p<.05$ ** $p<.01$ *** $p<.001$ ~ $p=.07$

Table 4

Differences in Instructional Practices of Reading Teachers by Grade Level

Variable	3rd Grade	4th Grade	6th Grade	F
Performance Oriented Strategies	3.80 (1.14)	4.47 (.73)	4.58 (1.11)	2.54~
Mastery Oriented Strategies	6.11 (.97)	6.04 (.65)	6.01 (.69)	0.08
Use of Demerits	2.04 (1.35)	1.40 (.70)	2.65 (2.13)	1.88
Use of Rewards	3.61 (1.57)	3.07 (1.57)	3.32 (1.80)	0.33
Teacher Efficacy	6.28 (.65)	5.71 (.68)	5.42 (1.15)	3.58*
Reading Supplements	1.70 (.82)	1.42 (.67)	1.56 (.78)	0.38
Reading/Writing Supplements	3.30 (1.49)	2.17 (.94)	3.00 (1.41)	2.32
Parents as Tutors	3.14 (.66)	2.21 (1.12)	2.00 (1.17)	5.34**

* $p<.05$ ** $p<.01$ *** $p<.001$ ~ $p<.09$

Table 5.

Differences in Instructional Practices of Elementary and Middle School Teachers

Variable	Elementary	Middle	t
Performance Oriented Strategies	4.12	4.57	--
	(1.11)	(1.21)	
Mastery Oriented Strategies	6.03	6.07	--
	(.79)	(.47)	
Use of Demerits	2.12	1.76	--
	(1.61)	(1.82)	
Use of Rewards	3.56	2.15	2.70**
	(1.66)	(.91)	
Teacher Efficacy	5.64	5.64	--
	(.99)	(1.11)	
Reading Supplements	1.44	1.90	-1.79~
	(.66)	(.88)	
Reading/Writing Supplements	2.59	3.80	-2.73**
	(1.23)	(1.23)	
Parents as Tutors	2.58	1.73	2.42*
	(1.03)	(1.10)	

* $p<.05$ ** $p<.01$ *** $p<.001$ ~ $p<.10$

Table 6
Means and Standard Deviations for Student Level Variables

Variable	Mean	SD
Reading Value Current Year	5.12	1.07
Reading Value Prior Year	5.24	1.13
Reading Self-Concept of Ability	5.31	1.04
Reading Worry	3.74	2.10
Parent Assistance With English Homework	2.39	1.62

Table 7
Analysis of Variance on Student Level Reading Variables

Variable	Gender	Grade	Interaction	Comment
Reading Value Current Year	9.99**	10.22***	0.37	Female>Male G3>G4>G6
Reading Value Prior Year	12.64***	10.13***	0.20	Female>Male G3>G4>G6
Reading Self-Concept of Ability	5.80*	2.28	0.87	Female>Male
Reading Worry	0.85	0.74	0.79	
Parent Assistance With Reading	0.86	1.84	0.06	

*$p<.05$ **$p<.01$ ***$p<.001$

Table 8
Zero Order Correlations Between Student-Level Variables

	1	2	3	4	5
1. Current Year Reading Value	1.00				
2. Prior Year Reading Value	.49**	1.00			
3. Self-Concept of Ability	.58**	.39**	1.00		
4. Parental Assistance	.13**	.10*	.07	1.00	
5. Worry about Reading	.17**	.02	.14**	.11*	
6. IQ	.06	.06	.16**	-.12*	-.16**

* p<.05 ** p<.01

Table 9

Hierarchical Linear Models Predicting Student Valuing of Reading

Variable	Full Model	Middle School Model
Random Effects		
Intercept	-.12*	-.07
Performance-Oriented Instructional Strategies	-.10*	-----
Use of Parents as Tutors	.07~	-----
Use of Cooperative Learning in Reading	-.08*	-----
Reading is in Middle School Classroom	-----	-.21*
Reading Self-Concept of Ability	.48***	.39***
Ability Grouping Used in Reading	-.12~	-----
Fixed Effects		
Valuing of Reading From Prior Year	-.77***	-.76***
IQ	.15***	.15***
Worrying About Reading	.10***	.09**
Gender	.28***	.28***
Parental Help With English	.10***	.10***

Gender: 1 = female, 0 = male
Ability Grouping: 1 = yes, 0 = no
Middle School Classroom: 1 = yes, 0 = no

* p<.05 ** p<.01 *** p<.001 ~ p<.10